

Abstract

2-Mercaptobenzothiazole is obtained from a melt of the raw product
5 prepared by the reaction of aniline, carbon disulphide and sulphur by pressure
synthesis in a reactor, where the melt contains 2-mercaptobenzothiazole,
unreacted raw materials, intermediate products and pitches, so that after reaching
a stationary state of the reaction medium it includes the following steps:

- 10 a) crystallization of the 2-mercaptobenzothiazole raw product from an
aniline solution,
- b) dividing the liquid phase (F_K) from crystallization from step a) in three
parts,
- c) removing one part of the liquid phase (F_{K1}) from crystallization from step
a) out of the process,
- 15 d) returning the second part of the liquid phase (F_{K2}) from crystallization
from step a) into the reactor for preparation of the raw product and supplementing
it with sulphur and carbon disulphide with respect to aniline,
- e) final purification of the crystallized 2-mercaptobenzothiazole from step a)
in the aniline liquid phase and separation of pure 2-mercaptobenzothiazole,
- 20 f) using the third part of the liquid phase (F_{K3}) from crystallization from step
a), supplemented with the liquid phase (F_R) from final purification from step e) and
possibly with aniline for crystallization of a further batch of the 2-
mercaptobenzothiazole raw product,
- g) using the liquid phase (F_R) from final purification from step f), together
25 with a part of the liquid phase (F_{K3}) from step e), possibly with aniline, for
crystallization of the 2-mercaptobenzothiazole raw product,
wherein the steps a) to g) are repeated.